

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
1	BRS	L1	0	piezoelectric adj1 stack and outer adj1 electrode adj4 copper	USPAT	2006/08/21 10:16	
2	BRS	L2	0	piezoelectric adj1 stack and outer adj1 electrode adj4 copper	US- PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/08/21 10:16	
3	BRS	L3	0	piezoelectric adj1 stack and outer adj1 electrode\$1 adj4 copper	US- PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/08/21 10:17	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
4	BRS	L4	1	(piezoelectric or ceramic)adj1 (stack\$1 or laminat\$3) and outer adj1 electrode\$1 adj4 copper	US-PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/08/21 11:10	
5	BRS	L5	4	(piezoelectric or ceramic) adj1 (stack\$1 or laminat\$3) and external adj2 electrode\$1 adj4 thick\$4	US-PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/08/21 11:53	
6	BRS	L6	3	(piezoelectric or ceramic) adj1 (stack\$1 or laminat\$3) and external adj2 electrode\$1 same shear\$3	US-PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/08/21 11:54	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
7	IS&R	L7	2524	(29/25.35).CCLS.	US- PGPUB ; USPAT ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/08/2 1 12:24	
8	BRS	L8	222	17 and shear\$3	US- PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2006/08/2 1 12:24	

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-

AND**IPC — e.g. D01B7/04 A01C11/02**

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4 results found in the Worldwide database for:

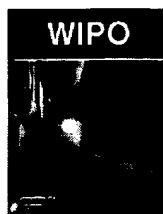
actuator and piezoelectric in the title AND **electrode and thin and portion** in the title or abstract

(Results are sorted by date of upload in database)

- 1 CELL DRIVE TYPE PIEZOELECTRIC/ELECTROSTRICTIVE ACTUATOR AND MANUFACTURING METHOD THEREOF**
Inventor: OMORI MAKOTO; KIMURA KOJI Applicant: NGK INSULATORS LTD
EC: B41J2/14D1; B41J2/16D1; (+7) IPC: **H01L41/083; B41J2/045; B41J2/055** (+19)
Publication info: **JP2006013411** - 2006-01-12
- 2 PIEZOELECTRIC ELEMENT ACTUATOR AND METHOD OF MANUFACTURING THE SAME**
Inventor: FUTAKUCHI TOMOAKI; SAKAI YUICHI; (+6) Applicant: TOYAMA PREFECTURE; TATEYAMA KAGAKU KOGYO KK; (+1)
EC: IPC: **B41J2/045; B41J2/055; B41J2/16** (+6)
Publication info: **JP2005297374** - 2005-10-27
- 3 Thin film piezoelectric actuator**
Inventor: KAWAKUBO TAKASHI (JP); OHARA RYOICHI Applicant: TOKYO SHIBAURA ELECTRIC CO (JP)
(JP); (+6)
EC: IPC: **H01L41/09; H01L41/053; H01L41/08** (+9)
Publication info: **US2005194867** - 2005-09-08
- 4 PIEZOELECTRIC ACTUATOR**
Inventor: WATABE YOSHIYUKI; WATANABE JUNICHI; Applicant: HITACHI METALS LTD
(+2)
EC: IPC: **H01L41/083; H01L41/09; H01L41/083** (+2)
Publication info: **JP4206786** - 1992-07-28

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Results of searching in PCT for:

(piezoelectric or electrostrictive) near (stack or laminat* or layer*) and thin
near electrode near (portion* or part* or section*): 0 records

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Refine Search

(piezoelectric or electrostrictive) near (stack or laminat*

No records matching your query found in PCT

Search Summary

piezoelectric NEAR stack: 76 occurrences in 45 records.

piezoelectric NEAR portion*: 56 occurrences in 46 records.

(piezoelectric NEAR stack AND piezoelectric NEAR portion*): 0 records.

piezoelectric NEAR electrode: 153 occurrences in 133 records.

piezoelectric NEAR portion*: 56 occurrences in 46 records.

(piezoelectric NEAR electrode AND piezoelectric NEAR portion*): 4 records.

((piezoelectric NEAR stack AND piezoelectric NEAR portion*) AND (piezoelectric NEAR
electrode AND piezoelectric NEAR portion*)): 0 records.

electrostrictive NEAR stack: 0 occurrences in 0 records.

electrostrictive NEAR portion*: 1 occurrence in 1 record.

(electrostrictive NEAR stack AND electrostrictive NEAR portion*): 0 records.

electrostrictive NEAR electrode: 5 occurrences in 5 records.

electrostrictive NEAR portion*: 1 occurrence in 1 record.

(electrostrictive NEAR electrode AND electrostrictive NEAR portion*): 0 records.

((electrostrictive NEAR stack AND electrostrictive NEAR portion*) AND (electrostrictive NEAR
electrode AND electrostrictive NEAR portion*)): 0 records.

((((piezoelectric NEAR stack AND piezoelectric NEAR portion*) AND (piezoelectric NEAR
electrode AND piezoelectric NEAR portion*)) OR ((electrostrictive NEAR stack AND
electrostrictive NEAR portion*) AND (electrostrictive NEAR electrode AND electrostrictive
NEAR portion*))) : 0 records.

piezoelectric NEAR laminat*: 68 occurrences in 34 records.

piezoelectric NEAR portion*: 56 occurrences in 46 records.

(piezoelectric NEAR laminat* AND piezoelectric NEAR portion*): 2 records.

piezoelectric NEAR electrode: 153 occurrences in 133 records.

piezoelectric NEAR portion*: 56 occurrences in 46 records.

(piezoelectric NEAR electrode AND piezoelectric NEAR portion*): 4 records.

((piezoelectric NEAR laminat* AND piezoelectric NEAR portion*) AND (piezoelectric NEAR
electrode AND piezoelectric NEAR portion*)): 0 records.

electrostrictive NEAR laminat*: 1 occurrence in 1 record.

electrostrictive NEAR portion*: 1 occurrence in 1 record.

(electrostrictive NEAR laminat* AND electrostrictive NEAR portion*): 0 records.

electrostrictive NEAR electrode: 5 occurrences in 5 records.

electrostrictive NEAR portion*: 1 occurrence in 1 record.

(electrostrictive NEAR electrode AND electrostrictive NEAR portion*): 0 records.

((electrostrictive NEAR laminat* AND electrostrictive NEAR portion*) AND (electrostrictive

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	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
1	IS&R	L1	0	("(PIEZOELECTRICORELECTROSTRICTIVEORELECTROMECHANICALORELECTROACTIVEORELECTRODISPLACIVE)adj3(stack\$3orlaminat\$4orlayer\$3)andelectrode\$1adj5thinadj1(portion\$1orpart\$1orsection\$1)").PN.	USPAT	2006/08/21 08:47	
2	BRS	L2	97	(piezoelectric or electrostrictive or electromechanical or electroactive or electrodisplacive)adj3 (stack\$3 or laminat\$4 or layer\$3) and electrode\$1 adj3 thin adj2 (portion\$1 or part\$1 or section\$1)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2006/08/21 08:50	
3	BRS	L3	14	(piezoelectric or electrostrictive or electromechanical or electroactive or electrodisplacive)adj3 (stack\$3 or laminat\$4 or layer\$3) and electrode\$1 adj3 thick\$2 adj2 (portion\$1 or part\$1 or section\$1)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2006/08/21 08:51	